In the Specification

Please amend paragraph [0029] as follows:

[0029] Fig. 3 illustrates torch 32 as having an elongated tubular body 64 connected to a handle 66. The handle 66 is relatively hollow which allows for extension of a water hose 68, water hose/power cable 70, and a gas hose 72. Hose 68 provides a coolant jacket that facilitates the ingress of coolant to the torch. Torch 32 is constructed to have an input hose 68 and an output hose 70 for carrying coolant to and from the torch. As such, heat generated within the torch is carried away to prevent overheating of the torch. Gas hose 72 facilitates the flow of shielding gas to the weld. Power cable 70 includes an adapter ~~76~~ 74 to connect the weld cable from the power source to the torch.

Please amend paragraph [0030] as follows:

[0030] Referring now to Fig. 4, the steps of a control algorithm to adaptively regulate cooling of a torch are set forth. The process begins at START 100 with powering-up of the power source, the coolant assembly, and other components of the welding process are likewise powered. Once the user identifies the welding process to be used through appropriate switches on the power source, a determination is made at 102 whether a TIG welding process is to be carried out. Since some welding processes do not require coolant circulation and power sources are capable of carrying out more than one process, the aforementioned determination is preferred and reduces the likelihood that an operator would forget to activate the cooling system for a TIG welding session. If a TIG welding process is not selected 102b, the cooling system is placed in a stand-by mode 116. If TIG welding is selected 102a, ~~T~~the controller 50 then detects whether a valid arc 104 is present at the weld. That is, the controller determines if a welding arc ~~40~~ 52 has been struck between the welding torch ~~30~~ 32 and the work piece 32 indicative of welding commencement. If a valid arc is present 104a, ~~T~~the controller 50 transmits a circulation commencement signal to the cooling system ~~28~~ 44 to activate motor 58 and pump 48 at 106 such that coolant is circulated through the welding torch. If a valid arc is not detected 104b, the controller determines if remote operation has been activated 108. If so 108a, coolant is caused to circulate upon manual start-up of the welding power source ~~26~~ 12 at step 110, 110a. The controller then transmits a circulation commencement signal to activate the solenoid pump ~~62~~ 48

and cause coolant flow through the torch at step 106. If the controller does not detect a manual start 110b or remote operation 108b, the controller determines if a specified time period has expired after termination of the arc at 112. If the time period has not expired 112a, coolant circulation is maintained at 106. If not 112b, the algorithm proceeds to step 114. The controller is configured to regulate the integrated cooling system such that coolant flow is maintained after deactivation of the welding torch until a temperature of the liquid coolant or torch falls below a certain value. The controller 50 compares temperature feedback from a sensor with a first set point temperature to determine if circulation should be maintained. In this regard, if the temperature of the liquid coolant does not exceed the temperature set point 114b, then the integrated cooling system ~~28~~ 44 is placed in stand-by mode 116. That is, the controller 50 is configured to repeatedly detect a coolant temperature signal from one or more temperature sensors and if coolant temperature exceeds a threshold 114a, circulation continues independent of welding torch activation status.

Please amend paragraph [0033] as follows:

[0033] In this regard, the controller 50 then detects whether a valid arc 142 is present at the weld. That is, the controller determines if a welding arc ~~40~~ 52 has been struck between the welding torch 32 and the work piece 36 indicative of welding commencement. If a valid arc is detected 142, 144, the controller 50 transmits a circulation commencement signal to the cooling system 44 to activate motor 58 and pump 48 at 146 such that coolant is circulated through the welding torch. If a valid arc is not detected 142, 148, the controller determines if the power source is outputting power 150. If so 150, 152, the process returns to step 142 to determine if a valid arc is present at the weld. In this regard, if coolant is circulating to the torch, coolant circulation will be maintained if the power source is delivering power even though an arc is not present at the weld. Steps 142-150 will repeat for a maximum period of time, i.e. thirty seconds, whereupon the power source is automatically caused to not deliver power. Simply, when an arc is not present at the weld, the power source is maintained in a power delivery or stand-by mode for a controlled period of time. As such, if the power source is not delivering power 150, 154, the controller determines if coolant circulation is being maintained or otherwise activated manually.

Please amend the Abstract as follows:

A cooling system connected to provide coolant to a welding-type component automatically circulates coolant through the welding component upon activation of the welding component. A controller is configured to regulate the cooling system such that upon activation of the welding-type component coolant is caused to at least flow through the welding-type component, and circulate after deactivation of the welding torch until a temperature of the coolant falls below a certain value or a specified time period has expired. The cooling system is constructed to be integrally disposed within a power source housing.